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The Genus *Spiloscapa* Bates
(Coleoptera: Tenebrionidae), with Descriptions of
New Species from the Oriental and Papuan Regions

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With 31 figures

Summary

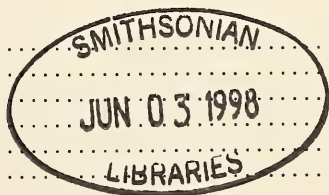
10 new species of the genus *Spiloscapa* Bates 1873 (Coleoptera: Tenebrionidae: Diaperini) from the Indonesian part of New Guinea (Irian Jaya) and from different Oriental regions are described, most of the known species are redescribed. The genus characters and the species characters are discussed. An identification key for all 19 congeners from the Oriental and Papuan regions is added.

Zusammenfassung

10 neue Arten der Gattung *Spiloscapa* Bates 1873 (Coleoptera: Tenebrionidae: Diaperini) vom indonesischen Teil Neu Guineas (Irian Jaya) und aus verschiedenen orientalischen Regionen werden beschrieben, die meisten der bekannten Arten wiederbeschrieben. Die Gattungs- und Artkennzeichen werden diskutiert. Ein Bestimmungsschlüssel für alle 19 Gattungs-Angehörigen aus der orientalischen und papuanischen Region ist angefügt.

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*) Contributions to Tenebrionidae, no. 19. – For no. 18 see: Stuttgarter Beitr. Naturk. (A) 559, 1997.

1. Introduction

The genus *Spiloscaptha* Bates 1873 (type species *thalloides* Pascoe 1869) of the Tenebrionidae tribe Diaperini as yet contains a couple of species, which have been described from the Oriental, Papuan and Australian Regions (Assam, Darjeeling, Malaysia, Taiwan, Japan, Philippines, Java, New Guinea and Australia: New South Wales) (GEBIEN 1925; BLAIR 1937; KASZAB 1970, 1975; NAKANE 1975; SHIBATA 1978).

New collections in the Indonesian part of New Guinea (Irian Jaya) by ALEXANDER RIEDEL and further material from different Oriental regions is presented, re-describing most of the known species. It is not a full revision of this genus because unfortunately I could not loan types of all known species. Nevertheless I prepared an identification key for all now 19 congeners, in a few cases using data only from the descriptions.

The species of *Spiloscaptha* Bates 1873 are quite similar to those of *Scaphidema* Redtenbacher 1849 (with Holarctic allopatric distribution) and a synonymy seems possible. Not a single synapomorphic character neither for *Scaphidema* nor for *Spiloscaptha* is known. Furthermore, it cannot be excluded that some species of *Scaphidema/Spiloscaptha* have been ascribed to other genera, in particular to *Platydema* Castelnau & Brullé 1831 with its numerous species of uncertain taxonomical status.

A few species (*baloghi* Kaszab 1970, *cyclopsensis* n. sp., *sulawesica* n. sp., *violacea* n. sp.) possess a striking bicolourous antenna, which occurs not only in other Coleoptera families (for example in Chrysomelidae), but also in other insect orders. Probably, we face herewith an interesting phenomenon of parallel evolution.

The material is housed in the following collections:

CSBB	Collection S. Bečvář, České Budějovice;
BMNH	British Museum of Natural History, London;
HNHM	Hungarian Natural History Museum, Budapest;
MHNG	Muséum d'Histoire Naturelle, Genève;
NHMW	Naturhistorisches Museum, Wien;
SMNS	Staatliches Museum für Naturkunde, Stuttgart.

I thank A. RIEDEL (Augsburg) for depositing parts of his collections in Stuttgart and S. BEČVÁŘ (České Budějovice), Dr. M. J. D. BRENDLELL (London), Dr. I. LÖBL (Geneva) and Dr. O. MERKL (Budapest) for the loan of material.

2. Genus characters

All species of *Spiloscaptha* possess the following characters (which are omitted in the species descriptions): head, pronotum and elytral intervals with sporadic and short erect setation; ventral side of body with sporadic longer and bended setation; eyes somewhat excavated only at the anterior margin; antenna with the segment 2 short, segment 3 elongate and the segments 4–11 broad and symmetrical and continuously increasing towards the tip, without club; pronotum without impressions and with distinctly separated lateral margin; elytron with rows of punctures more or less extinct on the lateral part and sometimes also in the basal part; elytron with the internal sutural interval somewhat swollen in particular at the end; elytron with distinctly separated lateral margin; tips of the elytra somewhat swollen; epipleuron nar-

rowed only shortly before the tip; prosternal apophysis flat and with an indistinct groove, not prolonged posteriorly; last abdominal tergite with a fine longitudinal median groove; alae fully developed; legs without peculiarities; aedeagus simple with a basal bent tube and triangular joined parameres; no external sexual dimorphism.

It cannot be decided at the present state of knowledge, which of these characters are diagnostic or synapomorphic for the genus and which occur also in related genera of the tribe Diaperini. Such a study with comparing outgroups is a bigger project because some of the related taxa (like *Platydema*) are quite species-rich and also not revised.

BATES (1873), instituting the genus, and later GEBIEN (1925) and KASZAB (1975) point out the great similarity of *Spiloscapha* with *Scaphidema* Redtenbacher 1849. Differences are said to be present in the form of the head, form of the antenna, form of the prosternal process, form of the intercoxal processes and other characters. I compared 4 Palearctic species of *Scaphidema* with the herein treated species of *Spiloscapha* and did not find a single significant difference between both. But without further investigations in this tribe I desist from establishing the synonymy already now.

3. Species characters

The following characters are considered species-specific: The body size; the body shape with the elytral lateral margin to be seen in dorsal view only at the shoulders or nearly on its total length; the dorsal colour pattern, considering a certain variability; the colour pattern of the antennal segments (distinctly bicolourous or not); the punctuation on head, pronotum, metasternum and abdominal sternites; the punctuation of the elytral rows with different extinctions of the external rows and the punctuation on the elytral intervals; the shape of the aedeagus, particularly of the parameres.

Single females are described only when distinct specific differences of several external characters are present, two other females without clear differences remain unidentified (Vietnam, SMNS; Malaysia, HNHM).

4. The species

Spiloscapha assamica Kaszab 1975 (figs 1, 18)

Material: India, Assam, Cherrapunji, 17. XI. 1967 leg. G. TOPÁL, 1 ♂ paratype HNHM.

Redescription: Shape and colour pattern of pronotum and elytra see fig. 1. Head, pronotum and scutellum ferruginous; elytron ferruginous with 2 basal black spots and a medial black stripe, and with a light yellow field between this black pattern; ventral side of body ferruginous. Head with somewhat denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with distinct punctures, distance of the punctures 1–5 times longer than the diameter; anterior margin also in the middle with fine border, basal margin unbordered. Elytron with 9 rows of punctures, third row with about 50 punctures; intervals flat, with distinct punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Meta-

sternum only laterally with distinct punctures, abdominal sternites equally punctured. Aedeagus see fig. 18. Body length 5.8 mm.

Distribution: Known only from the type locality in northern India (Assam).

Spiloscapa baloghi Kaszab 1970

Material: Not seen.

Distribution: Eastern New Guinea (Papua).

Spiloscapa bipunctata n.sp. (figs 3, 19)

Holotype (♂): Vietnam, Kui-Tschau, 300 m, 12. I. 1963 leg. G. KABAKOV (transcription from kyrillic label), HNHM.

Paratype: Vietnam, Prov. Vinh phu, Tamdao 80 km N Hanoi, 900 m, 15.–17. IV. 1986 leg. L. MEDVEDEV, 1 ♀ SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 3. Head, pronotum and scutellum ferruginous; elytron ferruginous, basal part except suture black and within this black part with a light yellow spot; ventral side of body ferruginous. Head with somewhat denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with 9 rows of punctures, third row with about 50 punctures; intervals flat, with fine punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 19. Body length 4.0–4.3 mm.

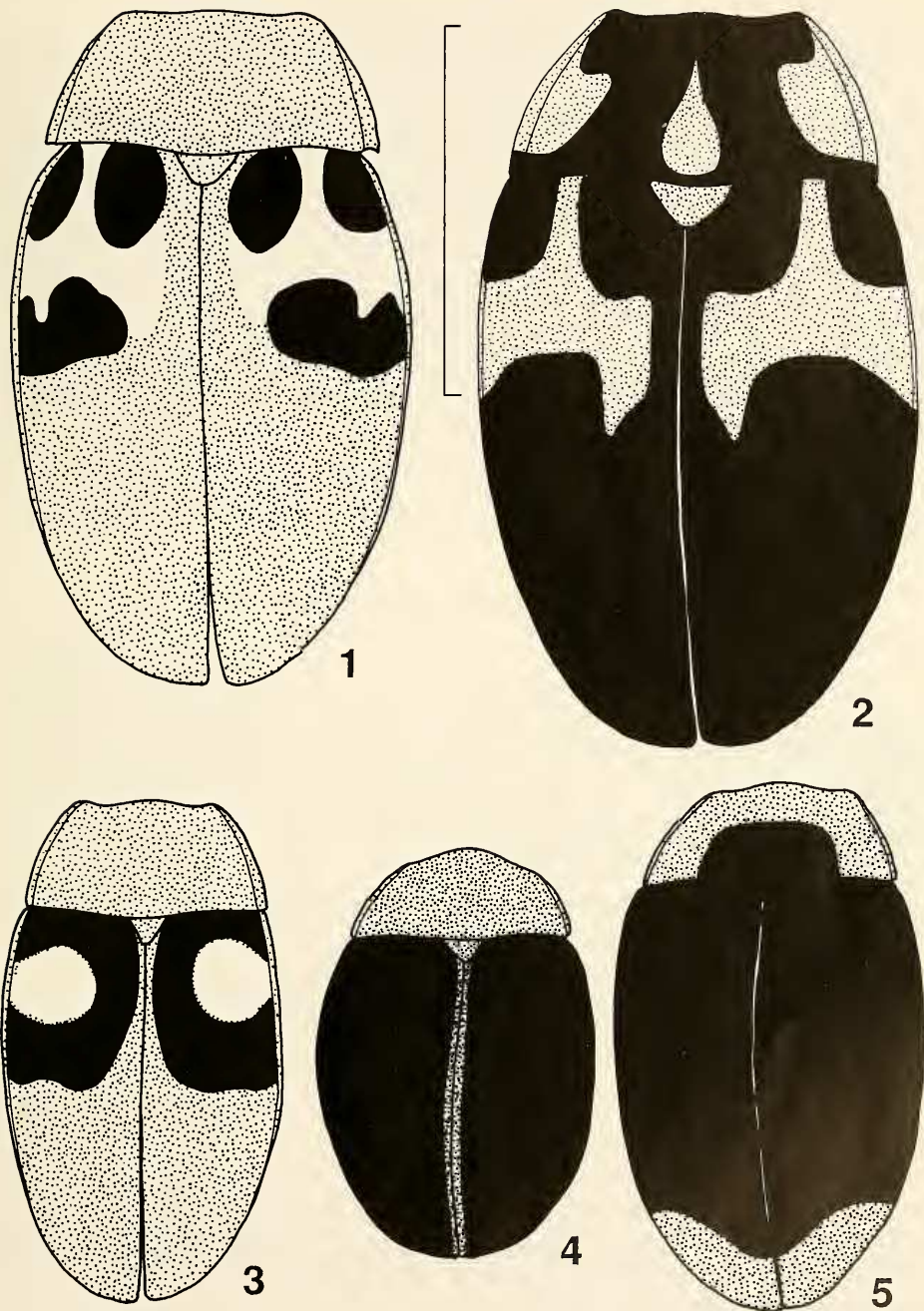
Distribution: Known only from the type localities in northern Vietnam.

Spiloscapa cyclopsensis n.sp. (figs 4, 20)

Holotype (♂): Irian Jaya, Jayapura, Sentani, Cyclops Mts., 300–1400 m, 10. VIII. 1991 leg A. RIEDEL, SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 4. Head, pronotum and scutellum dark ferruginous; elytron black with a bronze shine except the dark ferruginous sutural interval; ventral side of body dark ferruginous. Head with fine punctuation as on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head and with the very last segment distinctly light yellow. Pronotum with fine punctures, distance of the punctures 2–8 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 35 punctures; intervals flat, with very few fine punctures mainly in the basal part; lateral margin to be seen from dorsal only near the shoulders. Punctures on metasternum distinctly coarser laterally than medially, abdominal sternites equally punctured. Aedeagus see fig. 20. Body length 3.5 mm.

Distribution: Known only from the type locality on New Guinea.



Figs 1-5. Shape and colour pattern of pronotum and elytra of *Spiloscapa* species. - 1. *assamica*; - 2. *kobayashii*; - 3. *bipunctata* n. sp.; - 4. *cyclopsensis* n. sp.; - 5. *riedeli* n. sp. - Scale: 3.0 mm.

Spiloscapa eiliesa n.sp. (figs 16, 21)

Holotype (♂): Philippines, Eilies, without date and collector, HNHM.

Description: Shape of pronotum and elytra see fig. 16. Head, pronotum, scutellum and elytron ferrugineous, without colour pattern; ventral side of body ferrugineous. Head with somewhat denser and coarser punctuation than on pronotum; antenna black with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 40 punctures; intervals flat, with bigger punctures mostly in the anterior part; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum distinctly coarser laterally than medially, abdominal sternites only with very few fine punctures. Aedeagus see fig. 21. Body length 3.7 mm.

Remarks: The left antenna and the segments 10–11 of the right antenna of the holotype are missing.

Distribution: Known only from the type locality on the Philippines, the island is unknown.

Spiloscapa ichihashii (Nakane 1956)

Material: Not seen.

Remarks: The species was originally ascribed to *Platydema* Castelnau & Brullé 1831, but later transferred to *Spiloscapa* by the author (NAKANE 1975). The colour pattern on the elytra is quite similar as in the Himalayan species *assamica* Kaszab 1975, its aedeagus is unknown. The body length between both is different: *ichihashii* 4.6–5.0 mm, *assamica* 5.8 mm.

Distribution: Japan (Honshu, Kyushu).

Spiloscapa javanicum Gebien 1925 (fig. 12)

Material: N Sumatra, Lumban Julu, 1200 m, 18. II. 1990 leg. S. SCHÖDL, 1 ♀ NHMW.

Redescription: Shape and colour pattern of pronotum and elytra see fig. 12. Head, pronotum and scutellum ferrugineous; elytron ferrugineous with a narrow black band at the base and a wider transverse black band somewhat behind the middle reaching the suture; ventral side of body ferrugineous. Head with nearly the same punctuation as on pronotum; antenna black with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with distinct punctures, distance of the punctures 2–6 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 40 punctures; intervals flat, with a few fine punctures mainly in the basal part of the elytra; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum only laterally, abdominal sternites only with very few and fine punctures. Aedeagus unknown, only female available. Body length 3.9–4.0 mm.

Remarks: Type material was not available, thus the description and the figures were based on the above listed non-type female from Sumatra fully corresponding with the original description.

Distribution: Java (type locality Pengalengan), Sumatra.

Spiloscapa kobayashii Shibata 1978 (figs 2, 22)

Material: Taiwan, Ilan, Shenmi Lake, 8. II. 1993 leg. W.I. CHOW, 1 ♂ HNHM (det. O. MERKL).

Redescription: Shape and colour pattern of pronotum and elytra see fig. 2. Head ferruginous, pronotum black with the lateral parts and with a medial longitudinal patch ferruginous, scutellum ferruginous; elytron black with a transverse ferruginous patch in the anterior part sending a branch to the basal margin; ventral side of body ferruginous. Head with distinctly denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with feeble punctures, distance of the punctures 1–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 60 punctures; intervals flat, with distinct punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Metasternum only laterally with distinct punctures, abdominal sternites equally punctured. Aedeagus see fig. 22. Body length 6.0–6.2 mm.

Distribution: Taiwan (type locality Funchifu, Chiai Hsien).

Spiloscapa nepalica n. sp. (figs 13, 23)

Holotype (♂): Nepal, Sankhua Sabha Distr., Arun valley bottom near Num, 1050 m, 22. IV. 1984 leg. I. LÖBL & A. SMETANA, MHNG.

Paratypes: Same data as holotype, 4 ex. MHNG, 3 ex. SMNS.

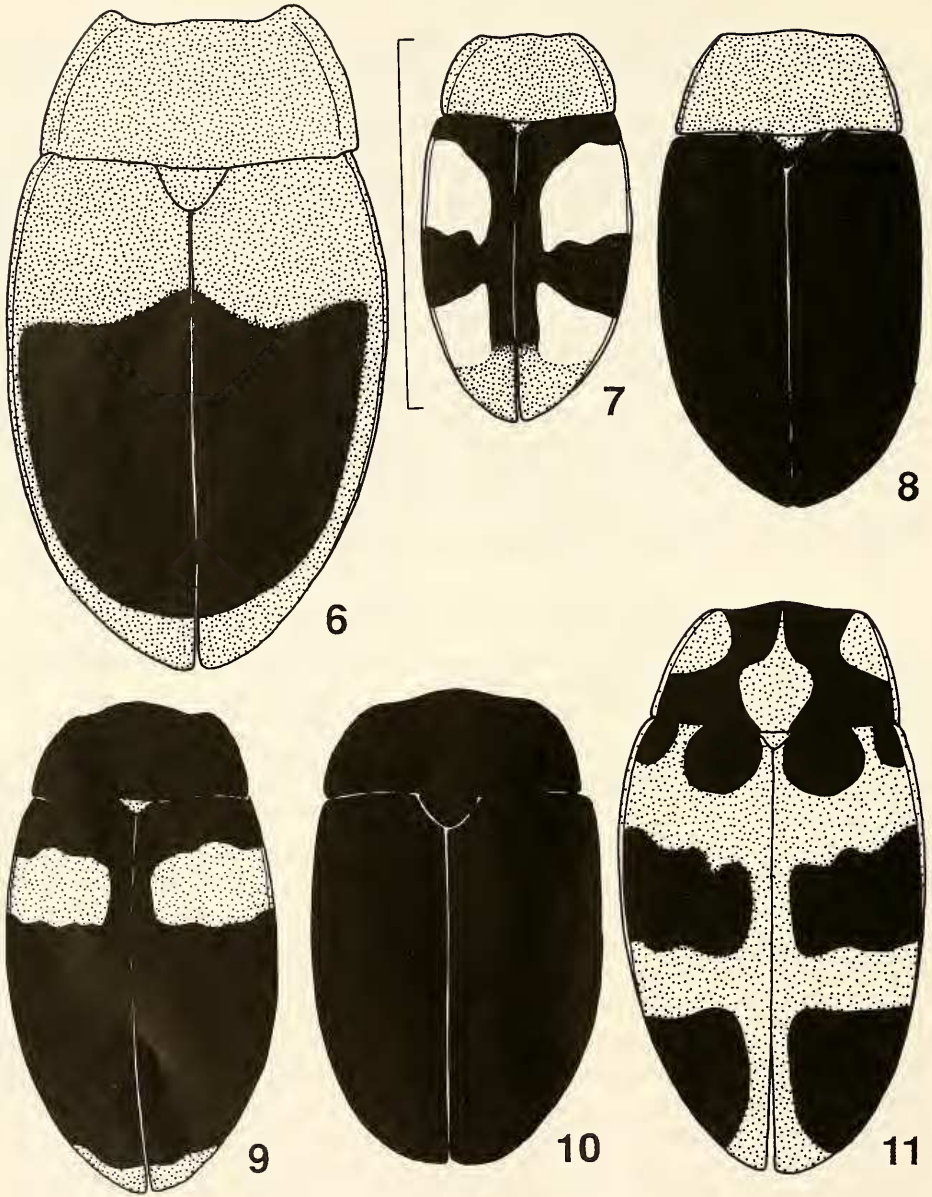
Description: Shape and colour pattern of pronotum and elytra see fig. 13. Head, pronotum and scutellum ferruginous; elytron ferruginous with 2 basal black spots and with a medial transverse black band not reaching the suture; ventral side of body ferruginous. Head with nearly the same punctuation as on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with distinct punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with 9 rows of punctures, third row with about 50 punctures; intervals flat, with a few fine punctures mainly in the basal part of the elytra; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 23. Body length 3.8–4.0 mm.

Distribution: Known only from the type locality in eastern Nepal.

Spiloscapa nigrofasciata Gebien 1925 (figs 14, 24)

Material: Malaysia, Pahang, Tioman Island, Kg. Tekek, 15.–26. VII. 1992 leg. R. SCHUH, 1 ♂ CSBB. – Malaysia, Pahang, Pulau Tioman, trail between Juara and Tekek, 10.–17. III. 1995 leg. O. MERKL, 1 ex. HNHM (det. O. MERKL).

Redescription: Shape and colour pattern of pronotum and elytra see fig. 14. Head, pronotum and scutellum ferruginous; elytron ferruginous with a lighter spot in the anterior part and with a medial transverse black band reaching the suture; ventral side of body ferruginous. Head with nearly the same punctuation as on pronotum; antenna dark brown with the 3 basal segments lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–6 times longer than the



Figs 6–11. Shape and colour pattern of pronotum and elytra of *Spiloscapa* species. – 6. *sulawesiana* n. sp.; – 7. *sumatrana* n. sp.; – 8. *ruficollis* n. sp.; – 9. *sinabunga* n. sp.; – 10. *violacea* n. sp.; – 11. *thalloides*. – Scale: 3.0 mm.

diameter; anterior margin in the middle and basal margin unborded. Elytron with 8 rows of punctures, lateral row extinct, third row with about 40 punctures; intervals flat, a few intervals with very few punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 24. Body length 3.4–3.8 mm.

Remarks: Type material was not available, thus the description and the figures were based on the above listed non-type specimens originating only 100 km away from the type locality and fully corresponding with the original description.

Distribution: Malay Peninsula (type locality Singapore).

Spiloscapha philippina Kaszab 1975 (figs 15, 25)

Material: Philippines, Luzon, Ilcos Norte, without date and collector, ♂ holotype HNHM.

Redescription: Shape and colour pattern of pronotum and elytra see fig. 15. Head, pronotum and scutellum ferrugineous; elytron ferrugineous with a light yellow spot in the anterior part and with a medial transverse black band not reaching the suture; ventral side of body ferrugineous. Head with somewhat denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–6 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 6 rows of punctures, lateral rows extinct, third row with about 40 punctures; intervals flat, a few intervals with few fine punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 25. Body length 3.9 mm.

Distribution: Known only from the type locality on the Philippine island Luzon.

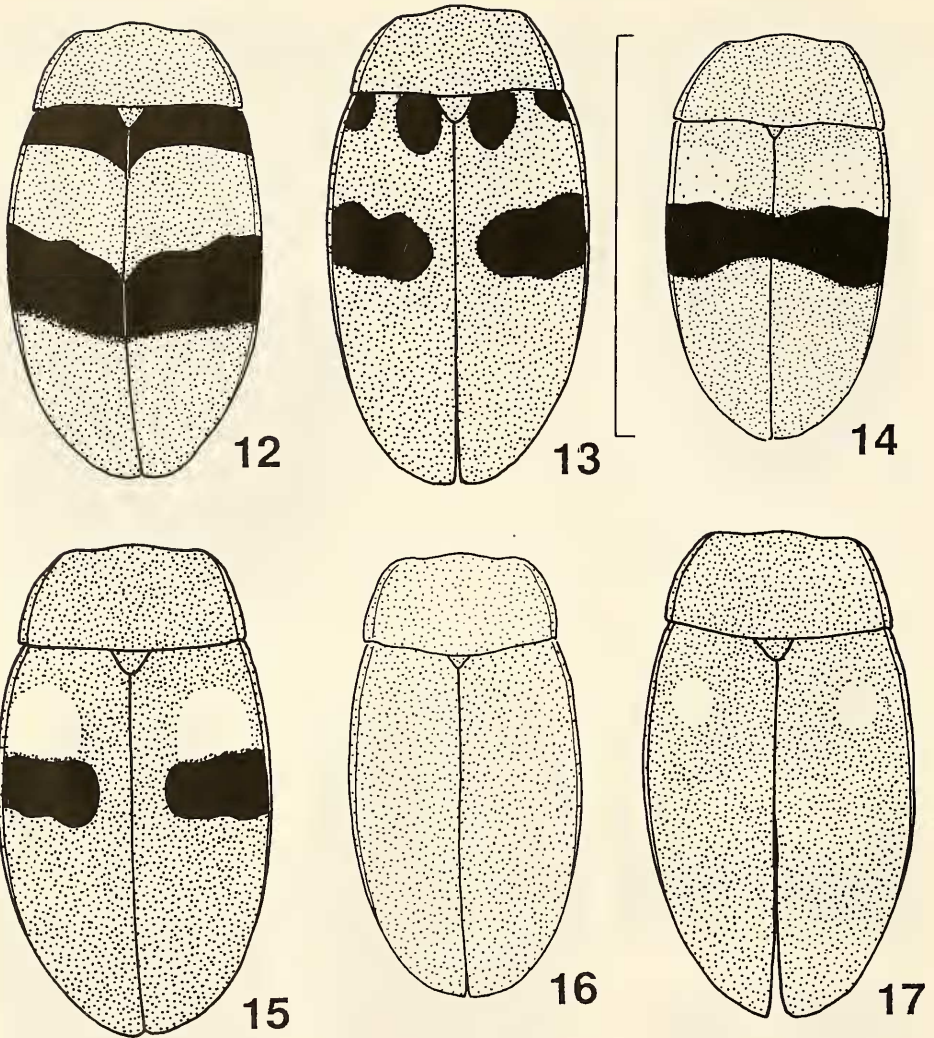
Spiloscapha riedeli n. sp. (figs 5, 26)

Holotype (♂): Irian Jaya, Prov. Jayawijaya, Wamena, Pronggoli, 2000–2400 m, 17.–19. IX. 1991 leg. A. RIEDEL, SMNS.

Paratypes: Irian Jaya, Prov. Manokwari, Iba, 1300 m, 7.–8. IV. 1993 leg. A. RIEDEL, 1 ♀ SMNS. – Irian Jaya, Prov. Manokwari, Minyambou, 1500–1900 m, 13.–14. IV. 1993 leg. A. RIEDEL, 1 ♀ SMNS. – Irian Jaya, Prov. Manokwari, Mokwam, Kwau, 1300–1650 m, 17. IV. 1993 leg. A. RIEDEL, 1 ♀ SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 5. Head dark ferrugineous; pronotum dark ferrugineous (only in females?) and/or with a bigger black scutellar spot (only in males?); scutellum black; elytron black without metallic shine with the apical part dark ferrugineous and with or without a dark ferrugineous humeral spot; ventral side of body dark ferrugineous. Head with distinctly denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, lateral rows extinct, third row with about 50 punctures; intervals flat, with a few nearly invisible punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum distinctly coarser laterally than medially, abdominal sternites equally punctured. Aedeagus see fig. 26. Body length 4.5–5.2 mm.

Remarks: The single available male (holotype) has a black basal spot on the ferrugineous pronotum whereas the females (all 3 paratypes) have an unicolourous, ferrugineous pronotum. These few specimens leave the question open whether this



Figs 12–17. Shape and colour pattern of pronotum and elytra of *Spiloscapa* species. – 12. *javanicum*; – 13. *nepalica* n. sp.; – 14. *nigrofasciata*; – 15. *philippina*; – 16. *eiliesa* n. sp.; – 17. *unicolor*. – Scale: 3.0 mm.

variation depends on the sex. The absence (2 females) or presence (1 female from Mokwam) of a humeral spot on the elytron seems not to depend on the sex.

Distribution: Known only from the type localities on New Guinea.

Spiloscapa ruficollis n. sp. (figs 8, 27)

Holotype (♂): Irian Jaya, Prov. Manokwari, Anggi, Tetaho, Iranmeba, 1500–1700 m, 25. III. 1993 leg. A. RIEDEL, SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 8. Head, pronotum and scutellum ferrugineous (scutellum translucent and partly black by

the covered elytra); elytron black with a bluish shine; ventral side of body ferruginous. Head with somewhat denser and coarser punctuation than on pronotum; antenna black with the 3 basal segments distinctly lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin also in the middle with fine border, basal margin unbordered. Elytron with only 7 rows of punctures, lateral rows extinct, third row with about 50 punctures; intervals flat, with fine punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 27. Body length 4.0 mm.

Distribution: Known only from the type locality on western New Guinea.

Spiloscapa sinabungae n. sp. (fig. 9)

Holotype (♀): North Sumatra, Medan, Kabanjahe, Gn. Sinabung, 2000 m, 7.–8. X. 1990 leg. A. RIEDEL, SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 9. Head ferruginous, pronotum black, scutellum ferruginous; elytron black, in the anterior part with a broad reddish spot and with a narrow reddish tip; ventral side of body dark ferruginous. Head with distinctly denser and coarser punctuation than on pronotum; antenna black with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–4 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 45 punctures; intervals flat, with fine punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum somewhat coarser laterally than medially, abdominal sternites equally punctured. Aedeagus unknown, only female available. Body length 4.1 mm.

Distribution: Known only from the type locality on the Indonesian island Sumatra.

Spiloscapa sulawesica n. sp. (figs 6, 28)

Holotype (♂): Central Celebes, Palu, Palolo, Lindu National Park, 25.–27. VIII. 1990 leg. A. RIEDEL, SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 6. Head, pronotum and scutellum ferruginous; elytron ferruginous with a broad black patch behind the middle; ventral side of body dark ferruginous. Head with somewhat denser and coarser punctuation than on pronotum; antenna distinctly bicolorous, dark brown with the 3 basal segments somewhat lighter and last segment light yellow. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin also in the middle with fine border, basal margin unbordered. Elytron with only 5 indistinct rows of punctures, lateral rows extinct, third row with about 40 punctures; intervals flat, with distinct punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum somewhat coarser laterally than medially, abdominal sternites equally punctured. Aedeagus see fig. 28. Body length 6.0 mm.

Distribution: Known only from the type locality on the Indonesian island Sulawesi (formerly Celebes).

Spiloscapa sumatrana n.sp. (fig. 7)

Holotype (♀): North Sumatra, Medan, Kabanjahe, Gn. Sinabung, 2000 m, 7.–8. X. 1990 leg. A. RIEDEL, SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 7. Head, pronotum and scutellum ferruginous; elytron black with 2 light yellow patches and a ferruginous tip; ventral side of body ferruginous. Head with fine and sparse punctuation as on pronotum; antenna dark ferruginous with the 3 basal segments distinctly lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–6 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, lateral rows extinct, third row with about 30 punctures; intervals flat, with fine punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites somewhat coarser laterally than medially. Aedeagus unknown, only female available. Body length 3.4 mm.

Distribution: Known only from the type locality on the Indonesian island Sumatra.

Spiloscapa thalloides (Pascoe 1869) (figs 11, 29)

Material: Australia, New South Wales, Acacia Plat., 9. XI. 1955 leg. J. SEDLACEK, 1 ♂ HNHM.

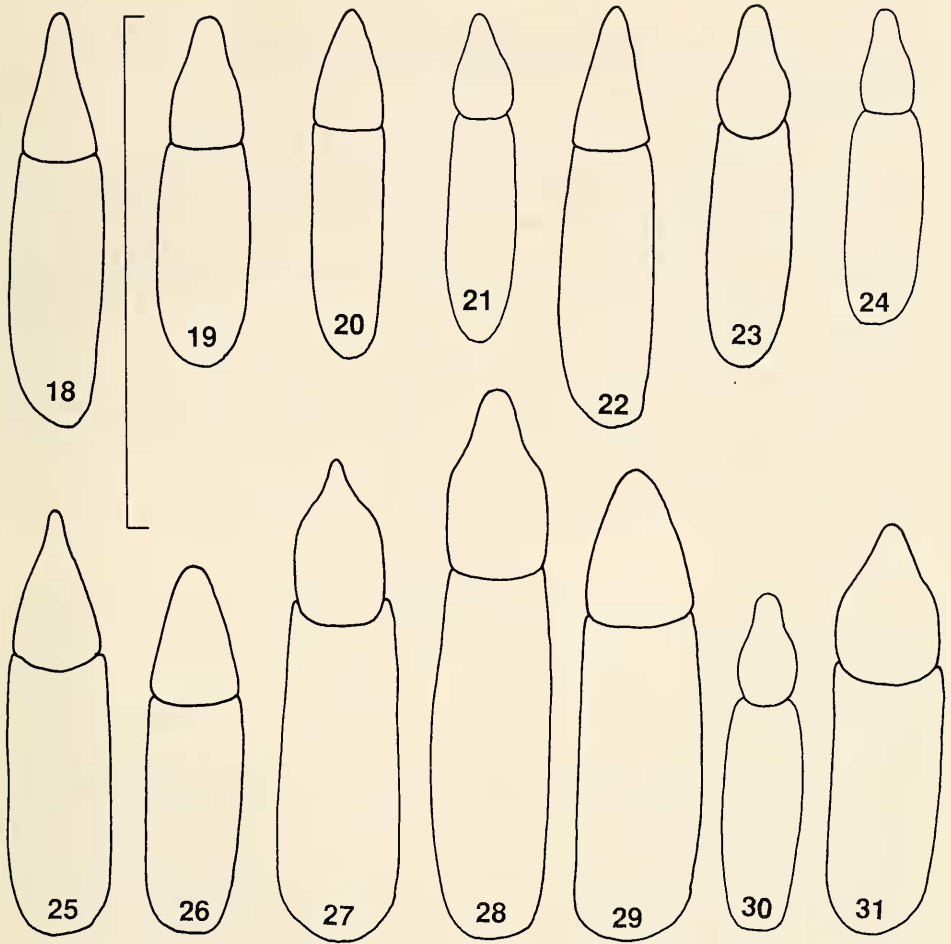
Redescription: Shape and colour pattern of pronotum and elytra see fig. 11. Head ferruginous; pronotum ferruginous with confluent black spots; scutellum ferruginous; elytron ferruginous with 2 basal black spots and with a medial and distal black stripe; ventral side of body ferruginous. Head with distinctly denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin also in the middle with fine border, basal margin unbordered. Elytron with only 7 rows of punctures, lateral rows extinct, third row with about 50 punctures; intervals flat, with a few fine punctures mainly in the basal half of the elytra; lateral margin to be seen from dorsal nearly on its total length. Metasternum and abdominal sternites only laterally with distinct punctures. Aedeagus see fig. 29. Body length 4.8 mm.

Distribution: Australia (New South Wales).

Spiloscapa unicolor Blair 1937 (figs 17, 30)

Material: Bengal, Kalimpong, Samsingh, 1800 ft., III.1934 leg. BALWAT SINGH, 1 syntype BMNH. – India, Darjeeling Distr., Sukna, 200 m, 7. X. 1978 leg. C. BESUCHET & I. LÖBL, 1 ♂ MHNG. – Thailand, Chumphon Prov., Pha to, 9°48' 98°47', 27. III.–14. IV. 1996 leg. K. MAJER, 1 ♀ SMNS.

Redescription: Shape and colour pattern of pronotum and elytra see fig. 17. Head, pronotum and scutellum ferruginous; elytron ferruginous with indistinct lighter humeral spot; ventral side of body ferruginous. Head with somewhat denser and coarser punctuation than on pronotum; antenna dark brown with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin



Figs 18–31. Aedeagus of *Spiloscapha* species. – 18. *assamica*; – 19. *bipunctata* n. sp.; – 20. *cyclopsensis* n. sp.; – 21. *eiliesa* n. sp.; – 22. *kobayashii*; – 23. *nepalica* n. sp.; – 24. *nigrofasciata*; – 25. *philippina*; – 26. *riedeli* n. sp.; – 27. *ruficollis* n. sp.; – 28. *sulawesica* n. sp.; – 29. *thalloides*; – 30. *unicolor*; – 31. *violacea* n. sp. – Scale: 1.0 mm.

also in the middle with fine border, basal margin unbordered. Elytron with 8 rows of punctures, external row extinct, third row with about 45 punctures; intervals slightly convex, with a few fine punctures all over the length; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 30. Body length 4.0 mm.

Remarks: The single available syntype was not dissected and therefore its sex is unknown, the figure of the aedeagus was based on the nearly identical non-type male originating also from Darjeeling. The single specimen from Thailand is a female, all external characters coincide with the specimens from Darjeeling.

Distribution: Northern India (Darjeeling; type locality Kalimpong), Thailand.

Spiloscapa violacea n. sp. (figs 10, 31)

Holotype (♂): Irian Jaya, Prov. Manokwari, Membey, 800–1200 m, 31. VIII. 1991 leg. A. RIEDEL, SMNS.

Paratypes: Same data as holotype, 2 ex. SMNS.

Description: Shape and colour pattern of pronotum and elytra see fig. 10. Head, pronotum, scutellum, elytron and ventral side of body black with a violet shine. Head with somewhat denser and coarser punctuation than on pronotum; antenna distinctly bicolourous with the 5 basal and 3 distal segments light yellow and the middle segments 6–8 dark brown. Pronotum with fine punctures, distance of the punctures 2–6 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with 9 rows of punctures, third row with about 55 punctures; intervals flat, a few intervals with very few fine punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see fig. 31. Body length 4.0–4.2 mm.

Distribution: Known only from the type locality on western New Guinea.

5. Species key

- 1 Antenna distinctly bicolorous with some of the segments black or dark brown and some segments light yellow 2
- Antenna black or dark brown with only the 3 basal segments somewhat lighter and coloured like the head 5
- 2 Elytral lateral margin to be seen in dorsal view nearly on its total length, body long oval 3
- Elytral lateral margin to be seen in dorsal view only near the shoulders, body round ... 4
- 3 Head and pronotum ferruginous, elytra ferruginous with a black patch; antenna with only the last segment light yellow; body length 6.0 mm *sulawesi* n. sp. (figs 6, 28)
- Head, pronotum and elytra black with a violet shine; antenna with the 5 basal and the 3 distal segments light yellow and with only the middle segments 6–8 dark brown; body length 4.0–4.2 mm *violacea* n. sp. (figs 10, 31)
- 4 Antenna with only the last segment light yellow; head and pronotum dark ferruginous, elytra black with a bronze shine; body length 3.5 mm *cyclopsensis* n. sp. (figs 4, 20)
- Antenna with the 3 last segments light yellow; head, pronotum and elytra shiny black; body length 4.0–4.1 mm *baloghi* Kaszab 1970
- 5 Body length 4.5–6.2 mm 6
- Body length 3.4–4.3 mm 9
- 6 Body of higher shape, *Diaperis*-like; parameres of aedeagus longer; Himalayan, Japanese and Taiwanese species 7
- Body more flat like most of the congeners; parameres of aedeagus broader and shorter; Papuan and Australian species 8
- 7 Pronotum ferruginous without black pattern; colour pattern on elytra see fig. 1; body length 5.8 mm; Himalayan species *assamica* Kaszab 1975 (figs 1, 18)
- Pronotum ferruginous without black pattern; colour pattern on elytra similar as in fig. 1; body length 4.6–5.0 mm; Japanese species *ichibashii* (Nakane 1956)
- Pronotum black with ferruginous pattern; colour pattern on elytra see fig. 2; body length 6.0–6.2 mm; Taiwanese species *kobayashii* Shibata 1978 (figs 2, 22)
- 8 Pronotum and elytra ferruginous with characteristic colour pattern (fig. 11); body longer; Australian species; body length 4.8 mm *thalloides* (Pascoe 1869) (figs 11, 29)
- Pronotum uniformly ferruginous or with black scutellar spot, elytra mostly black (fig. 5); body broader; Papuan species; body length 4.5–5.2 mm .. *riedeli* n. sp. (figs 5, 26)
- 9 Pronotum ferruginous, elytra black with a bluish metallic shine; parameres of aedeagus with a narrow tip (fig. 27); Papuan species; body length 4.0 mm *ruficollis* n. sp. (figs 8, 27)

- Pronotum and elytra uniformly ferrugineous or with lighter or black colour pattern, without metallic colour; parameres of aedeagus with a broader tip; Oriental species; body length 3.4–4.3 mm 10
- 10 Pronotum and elytra uniformly ferrugineous, at most with a somewhat lighter humeral spot on the elytra 11
- Pronotum black or ferrugineous, elytra with a distinct colour pattern of black and/or light bands or spots 12
- 11 Elytra ferrugineous with a somewhat lighter humeral spot; elytral intervals slightly convex; parameres of aedeagus with concave lateral margin (fig. 30); Indo-Thailandese species; body length 4.0 mm *unicolor* Blair 1937 (figs 17, 30)
- Elytra uniformly ferrugineous; elytral intervals flat; parameres of aedeagus with straighter lateral margin (fig. 21); Philippine species; body length 3.7 mm *eiliesa* n. sp. (figs 16, 21)
- 12 Pronotum black, elytra mostly black; body length 4.1 mm *sinabungana* n. sp. (fig. 9)
- Pronotum ferrugineous, elytra ferrugineous with black and/or lighter yellow colour pattern; body length 3.4–4.3 mm 13
- 13 Basal part of elytra except the suture black and within this black part with a distinct lighter yellow spot; body length 4.0–4.3 mm *bipunctata* n. sp. (figs 3, 19)
- Colour pattern on elytra different; body length 3.4–4.0 mm 14
- 14 Elytra with 4 lighter yellow spots and anterior part longitudinally black along the suture (fig. 7); body length 3.4 mm *sumatrana* n. sp. (fig. 7)
- Elytra in or somewhat before the middle with a transverse black band, sometimes not reaching the suture; body length 3.4–4.0 mm 15
- 15 Basal part of the elytra with a transverse black band or with 4 black spots, without lighter spots 16
- Basal part of the elytra ferrugineous, with lighter spots before the median transverse black band 17
- 16 Basal part of the elytra with a transverse black band reaching the suture, medial transverse black band not interrupted at the suture; elytron with only 7 rows of punctures; body length 3.9–4.0 mm *javanicum* Gebien 1925 (fig. 12)
- Basal part of the elytra with together 4 black spots, medial transverse black band interrupted at the suture; elytron with 9 rows of punctures; body length 3.8–4.0 mm *nepalica* n. sp. (figs 13, 23)
- 17 Medial transverse black band on elytra reaching the suture; elytron with 8 rows of punctures; body length 3.4–3.8 mm *nigrofasciata* Gebien 1925 (figs 14, 24)
- Medial transverse black band on elytra not reaching the suture; elytron with only 6 rows of punctures; body length 3.9 mm *philippina* Kaszab 1975 (figs 15, 25).

6. References

- BATES, F. (1873): Notes on Heteromera, and descriptions of new genera and species (no. 5). – Entomologist's mon. Mag. 9: 201–204; London.
- BLAIR, K. (1937): Some new species of Indian Heteromera (Col.). – Entomologist's mon. Mag. 73: 35–37; London.
- GEBIEN, H. (1925): Die Tenebrioniden (Coleoptera) des Indomalayischen Gebietes, unter Berücksichtigung der benachbarten Faunen, VIII. – Philipp. J. Sci. 28: 101–129; Manila.
- KASZAB, Z. (1970): The scientific results of the Hungarian soil zoological expeditions to New Guinea. Tenebrionidae (Coleoptera). – Anns hist.-nat. Mus. natn. hung. 62: 257–280; Budapest.
- (1975): Tenebrioniden aus Indien (Coleoptera). – Acta zool. hung. 21: 1–38; Budapest.
- NAKANE, T. (1975): On the heteromeres Coleoptera occurring in Kyushu including Yakushima and Tanegashima. – Mem. natn. Sci. Mus. Tokyo 8: 161–172; Tokyo. [in Japanese]
- SHIBATA, T. (1978): Notes on the Tenebrionidae from Taiwan and Japan, I. (Coleoptera). – Ent. Rev. Japan 32: 19–27; Osaka.

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